



Cyvella Controlled-Rate Freezer

Precise, reproducible freezing for cell therapy and biobanking workflows.

From R&D to GMP-oriented manufacturing



Product Overview

Cyvella is a controlled-rate freezer designed for cell therapy, gene therapy, and biobanking applications, providing precise and reproducible freezing profiles for cryopreserved biological materials.

With liquid nitrogen cooling, dual temperature monitoring, and uniform chamber temperature distribution, Cyvella helps support post-thaw viability, functional consistency, and process standardization.

The system is suitable for immune cells, stem cells, tumor cells, hematopoietic stem cells, and other valuable cell products. It is designed to support GMP-oriented cell processing and long-term cryogenic storage workflows.

Key Features

- **Reliable LN₂-based cooling system**

Redundant dual-solenoid valve design helps ensure stable and uninterrupted freezing operation.

• **Wide temperature and cooling range**

Temperature range from -180°C to +50°C, with programmable cooling rates from 0.1 to 99.9°C/min.

• **Dual-probe temperature monitoring**

Chamber and sample temperature probes enable real-time temperature profile monitoring and in-situ probe calibration.

• **Excellent chamber temperature uniformity**

Chamber temperature uniformity within ±2°C supports consistent freezing conditions across samples.

• **Flexible protocol management**

6 preset programs and up to 200 user-defined programs support diverse cryopreservation workflows.

• **Complete data recording and export**

Automatic recording of temperature curves, run logs, and alarm events, with PDF export for traceability.

• **Integrated touchscreen control**

10-inch touchscreen enables protocol editing, run monitoring, and historical data review without an external PC.

• **Enhanced operational safety**

Optional electronic door lock helps prevent accidental door opening and temperature fluctuation during operation.

• **Cleanroom-compatible exterior**

SUS304 stainless steel interior and powder-coated exterior support use in controlled environments.

• **Validation support**

Supports IQ/OQ/PQ validation for GMP-oriented manufacturing workflows.

Specifications

Specification	Cyvella - 17	Cyvella - 34	Cyvella - 51
2 mL Cryovial Capacity	380	810	1190
5 mL Cryovial Capacity	228	486	714
50 mL Cryopreservation Bag Capacity	30	60	90
250 mL Cryopreservation Bag Capacity	10	20	30
Temperature Range	-180-50 °C	-180-50 °C	-180-50 °C
Cooling Rate	0.1-99.9 °C/min	0.1-99.9 °C/min	0.1-99.9 °C/min
Warming Rate	0.1-12 °C/min	0.1-12 °C/min	0.1-12 °C/min
LN ₂ Consumption per Program	12	15	20
Temperature Uniformity	<2 °C	<2 °C	<2 °C
Interior Dimension, W × D × H	180x305x330	330x305x330	510x305x330
Exterior Dimension, W × D × H	866x625x550	1036x625x330	1216x625x550
Chamber Volume	17	34	51
Net Weight	81	91	101
Maximum Power	2500	3000	3000
Power Supply	AC 220 V, 50/60 Hz		
Controller	10-inch touchscreen & microprocessor		
Available Programs	6 preset + 200 user-defined		